



Research

Apprentice nurses' with specific learning differences: A phenomenological inquiry into their lived experience

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ABSTRACT

Aim: To explore the lived experiences of apprentice nurses who have been identified with Specific Learning Differences.

Background: Apprentice nurses with a learning adjustment plan face unique challenges within their work base, on clinical placements, and in academic settings.

Aim: To explore the experiences of apprenticeship nurses with specific learning differences.

Methods: An interpretative phenomenological approach was employed through in-depth, semi-structured interviews with 8 nursing apprentices nursing with a learning plan.

Results: Four themes discussed are *learner identity* revealed how participants perceived themselves in relation to nursing, academia and their learning differences; *time* detailed the apprentices need to engage in extended study time; *the changing learning environment* describes the impact of physical and social components of the learning space; *Technological enhancements/barriers* related to modifications made to support learning and the impact they had.

Conclusions: The findings support collaborative, inclusive teaching and learning practices within the pre-registration apprentice nursing curriculum. Early identification and practical reasonable adjustments in the academic, work base and clinical placement environments can have a positive impact on this group of apprentice nurses.

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Introduction

Specific learning differences (SpLD) encompass a range of neurodevelopmental conditions which affect how individuals process information and learn. The term normally, but not exclusively, refers to a number of different conditions including dyslexia, dyspraxia, dyscalculia, and attention deficit hyperactivity disorder (Sewell, 2022). Common traits of SpLD can manifest as difficulties in one or more areas of learning, which may include reading, writing, mathematics, concentration, organizational skills and short-term memory. Typically, SpLD appears in childhood and will persist throughout an individual's lifetime (Department for Education, 2024). The exact causes are not fully understood and remain a subject of ongoing investigation. However, a combination of genetic, environmental and neurological influences has been identified as likely contributors towards their development (Carroll et al., 2020). Each presentation is

unique, but symptoms may affect various aspects of an individual's daily functioning and can have a profound impact in an academic setting. However, implementing appropriate interventions can support the achievement of successful educational outcomes (Crawford et al., 2022).

Individuals with SpLD often possess characteristics and traits which are highly beneficial in the nursing profession. They may display strengths such as holistic thinking, pattern recognition and visuo-spatial skills. Furthermore, individuals with SpLD have been acknowledged for exceptional relational skills, innovative thinking, observational abilities and strong empathy for others (White, 2024). Hence, there is an argument that vocational healthcare courses such as nursing studies may attract more students with SpLD than other disciplines; this is supported by Crawford et al. (2022) who identified a prevalence of 12.5 % SpLD in a study of 1,152 nursing students.

Registered nurse degree apprenticeships (RNDA) were officially implemented in the UK in 2017 as a strategic measure to address several key issues in the nursing workforce and broader healthcare system (Health Education England (HEE), 2021). Apprentices are

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learners who are employed initially by a healthcare organization to undertake training, rather than the traditional entry route of where the applicant applies directly to a higher education institution. The education is still provided by the higher education institution, but through a minimum of 20 % "off-the-job" learning. The apprentices enrolled on the RNDA programs must still meet the [Nursing and Midwifery Council \(NMC\) Standards of Proficiency \(2024\)](#) to be admitted onto the professional register (therefore, they are qualified to the same threshold standard as current registered nurses) the completion of the RNDA. The benefits of this route to the nursing profession include a wealth of life experiences and the development of a diverse workforce. It may also address the ongoing challenges of recruitment and retention of nurses. RNDA programs combine academic study with on-the-job training which can be completed over 2–5 years ([HEE, 2021](#)). The entry point of study is determined upon the student's previous knowledge, skills and experiences.

SpLD can have a significant impact on a learner's academic journey in higher education. However, with reasonable adjustments and appropriate support, student nurses can succeed. As RNDA programs were established in 2017, there is a lack of research into these newer degree programs and the wider impact that SpLD can have on these learners. Recruitment to apprenticeship nursing programs is continuing to rise. Data from July 2021 suggests over 2,000 new nurse degree apprentices commenced training within a 12-month period ([NHS Employers, 2022](#)).

This study considers the perspectives, challenges, and coping strategies of this group of apprentice learners. The findings may inform educational institutes and healthcare organizations about the necessary accommodation and support systems. This may specifically help apprentice nurses with SpLD to succeed within their academic, clinical placement and work base areas and thus promote more inclusive educational practices.

Materials and Methods

An interpretive phenomenological approach was broadly employed within this research. This approach was chosen to gain deeper insights into the lived experience of participants and the complex interplay of personal, social, and cultural factors that shape their perspectives. Recognizing and valuing their perspectives and their interpretations of reality has the potential to contribute towards social change by raising awareness of diverse perspectives, challenging misconceptions, and promoting equity and inclusion in nursing education ([Olmos-Vega et al., 2023](#)).

Participant Recruitment and Sample

Participant recruitment was conducted via a gatekeeper (program leaders) across a single higher education institution. Gatekeepers provided details of the research and contact details to students undertaking the RNDA program. A total cohort of approximately 300 students received this announcement. Purposive inclusion criteria were developed: the potential participants must be studying on a nursing degree apprenticeship program and have a student support plan in place for any specific learning difference.

A total of ten potential participants contacted the primary researcher (author 1) to be considered for inclusion. Eight (8) participants were included in the study, with two (2) participants not meeting the inclusion criteria due to having a student support plan in place without an associated specific learning difference. Participants ranged across the branches of nursing ($n = 1$ Adult; $n = 1$ Learning Disabilities; $n = 6$ Mental Health) and with ages ranging from 25 to 49 years old. Of the 8 participants 2 identified as male and 6 as female.

Data Collection Tool

Semi-structured interviews were conducted with participants between April and May 2024 via Microsoft Teams, with the participants and the first author. The interviews for all participants lasted approximately 27 minutes on average, with 12 minutes being the shortest interview and 36 minutes being the longest.

Data Analysis

Whilst the broad approach to the work was undertaken using an interpretative phenomenological analysis approach, the data was analyzed using [Braun and Clarke's \(2022\)](#) reflexive thematic analysis. This approach was taken due to the potential outcomes of the research being actionable changes to practice ([Braun & Clarke, 2021](#)). Precedents have also been set for using thematic analysis within interpretative phenomenological analysis with [Spiers and Riley \(2019\)](#) stating that the approaches of thematic analysis and interpretative phenomenological analysis are similar in many respects.

As the primary researcher (Author 1) also experiences traits of dyslexia, completing the analysis by hand allowed for printed transcript copies to be made, which provided the opportunity for personalized annotations on the text and visual cues aiding comprehension and retention of information. All printed copies and annotations were destroyed by shredding immediately after use. *ATLAS.Ti 24* ([ATLAS.Ti Scientific Software Development GmbH, 2024](#)) was employed by the second researcher (author 2) to independently code and analyze. The developed themes were agreed by each author.

Ethical Considerations

Ethical approval was obtained from local higher education institution Ethics Committee (ref: 025391).

Findings

A thematic map was developed to illustrate each of the four main themes, subthemes and their relationship with each other (see [Fig. 1](#)). Together these provide a comprehensive narrative of the participants' experiences and perspectives. Each theme: learner identity, time, the changing learning environment, and technological barriers/enhancements. Each theme has sub-themes that highlight the complex interplay of the experiences of the participants. Hope is identified as being a sub-theme which is drawn across all main themes. Each main theme is discussed below, with verbatim quotations taken from the participants.

Learner Identity

Identity is described as the characteristics, traits and attributes that define and distinguish individuals ([Guenther et al., 2020](#)). Having an SpLD identity emerged as a prominent and pivotal theme across all participant interviews within the data set. This theme encompasses three associated sub-themes of liminal space, acceptance and support, and external perceptions of self. The liminal space sub-theme recognizes that there is a period within participants' leaning journeys where there are issues, but the boundary of diagnosis has yet to be crossed. Acceptance and support whilst important for the participants often can lead to barriers, which links with the technological theme of the analysis. Finally, the external perception of the learner also impacts on the development of the learner's identity.

It is worth noting that five of the eight participants within the research did not have a Specific Learning Difference diagnosis prior to joining university and commencing their nursing studies, which suggests that a lack of awareness and delayed identification of SpLD

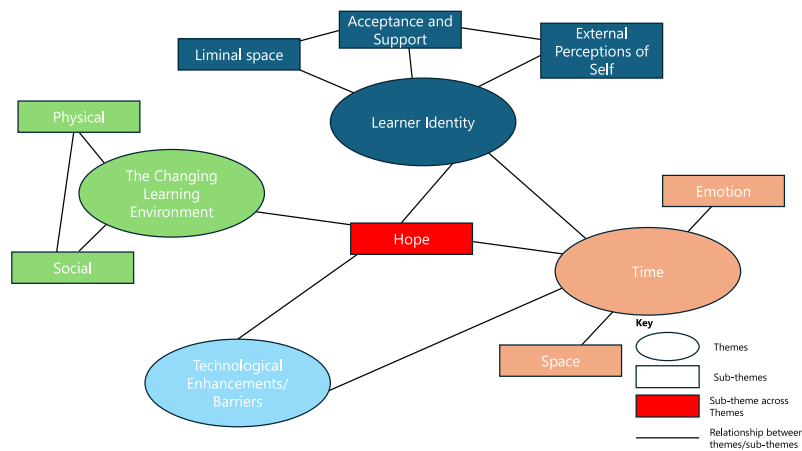


Fig. 1. Thematic map of themes and sub-themes.

still exists (e.g., Cheetham, 2023). For most participants, SpLDs were only detected when they began to submit their academic work:

“...it’s only been the last month that I’ve gotten, like me, official diagnosis...” [Participant 8]

This study findings appear to reflect the suggestion that diversifying entry routes to nursing through apprenticeship programs has provided an influx of mature students and those pursuing a second career (Leader et al., 2022). These findings also suggest that some mature apprentice learners may have completed their prior education before widespread recognition and diagnosis of SpLD and as a result their difficulties have been previously unrecognized or diagnosed. It may also suggest there have been missed opportunities for earlier identification of SpLD within the participant’s wider educational journey.

“...I probably did have Specific Learning Differences then or some form of learning difficulty, but it wasn’t identified. It wasn’t a known thing then in the late 80 s, early 90s...so I was excluded a lot I was treated like a class clown...so I acted like a class clown...” [Participant 1]

Conversely, one participant described challenges relating to receiving the diagnosis. Highlighting how a diagnosis is initially communicated may play a pivotal role in shaping the individual’s response, willingness to seek help and the overall success of intervention strategies (Walker et al., 2020).

“...I did find it a bit overwhelming because when I got the report of the educational psychologist, that was really difficult to understand and then the bit I could pick out seemed quite negative...” [Participant 8]

Many participants gave themselves negative self-labels considering their diagnosis, supporting existing literature which links the presence of SpLD with low self-esteem. A representative example of this is given below:

“...in my mind I’m stupid...” [Participant 1]

Given the nature of the reports and the participants’ perception of them, it is therefore unsurprising that in some studies up to 25 % of nursing students study did not disclose the difficulties they experienced on placement associated with dyslexia (Evans, 2014). Hence, there is a responsibility for higher education providers and clinical practice placements to collaboratively create a supportive engaging

environment to facilitate disclosure without any perceived negative consequences, which may mean a wider overhaul of educational delivery to be more inclusive, such as the approaches taken through Universal Design for Learning (Tobin & Behling, 2018).

Time: Spatial and Emotional Impact

This theme encompassed two sub-themes of emotion and space. Participants in the study described a perceived need to engage in extended study time outside of university teaching hours. Several reasons were repeatedly mentioned: including slower processing speeds, difficulty concentrating for the duration of lectures, problems with organizational skills, reading, writing, and memory retention issues.

“...I’m just getting overwhelmed knowing what I need to remember having to go back over things quite a lot ‘cause I can sit in a lesson and sometimes it takes a while for things to sink in or for reading things. It does not always sink in straight away...” [Participant 8]

Participants described additional study periods enabled them to be better prepared for classes. Which in turn helped them manage workload, reinforce learning, understanding and retention of their learning. Many participants stated that preparation by pre reading the lesson’s content ahead of time helped them to become familiar with the topic before the class began. Others describe needing extra time to review notes and consolidate what has been taught, to ensure that they have understood the material correctly.

“...I know it’s been really helpful to have slides in advance because I’ve actually looked through. So therefore, when the PowerPoints come up, I think right, I know what’s coming...” [Participant 4]

One participant described frustration and perceived inequality stating a need to invest additional study time to achieve the same outcomes as their peers in assignments which may suggest need for further inclusive assessments to allow all learners to express their knowledge.

“...it takes me ages to produce work and some people can do it in a week and we get the same mark...that is a frustration...” [Participant 6]

This theme also revealed the emotional aspect of extra time requirements and perceptions of inadequate time allocation for apprentices with SpLD. The extra time apprentices with an SpLD plan

need to study and complete assignments can be exhausting for them, leaving little opportunity for personal activities, hobbies or social interactions. This may cause isolation and resentment. Some participants did not believe they were allocated enough time to compensate for their extended study time requirements, which have visible emotional impacts on the participants:

“...I just don't feel we have enough time to get that extra support because we're working, we're doing the day at university, so then it's the weekend. So, we don't have time in the week because we're working as well...” [Participant 7]

Within the theme of time, participants described additional study periods enabled them to manage cognitive load, reinforce learning, prepare adequately for classes and make practical applications to support better understanding and retention of their learning.

The Changing Learning Environment

The changing learning environment theme refers to the physical (including virtual) and social setting in which education and learning activities take place. A well-designed learning environment is one which supports and enhances the learning process and caters to the diverse needs and preferences of all learners (CAST, 2024). This theme describes how these factors are perceived, either as supportive or as hindering the learning experiences of the participants in the study. This theme links closely with identity, particularly how participants believe they are perceived by others in the learning environment.

The main aspect of physical learning environment discussion referred to participant preference for either face to face or remote learning. Participants provided contrasting perspectives regarding their preferred academic environment for learning.

“...Everyone's online but I'm still in my own environment. I'm in my comfort zone so I work better with this...” [Participant 1]

“...I really prefer face to face. Just because online, you can get so distracted...” [Participant 3]

Environmental barriers are seen as one of the key elements that introduce difficulties with regards to communication within the learning and teaching setting. This has been highlighted within the training of doctors (e.g., Pattinson et al., 2025) from the perspective of different workplace environments. A comfortable and stimulating environment can increase student engagement and participation (Meibert et al., 2020).

Within this study one participant also described a preference for different learning environments dependent upon the type of teaching delivery:

“...A classroom taught session, I like it over teams, but for study skills and if people are showing us things are like better to be face to face...” [Participant 4]

This finding could suggest that there may be benefits to consider when offering apprentices, a choice of learning environment to meet their individual learning needs. Within the virtual learning environment participants described developing simple but effective personalized study strategies to help them manage the cognitive load, breaking down complex information into manageable chunks (Crouch, 2019). The use of multi-sensory learning approaches to enhance understanding was described as helpful. Often participants described sourcing their own learning material.

“...YouTube's been quite good. Sort of finding your material and material that. Sounds a bit mad, but I've been watching things that

are maybe geared more towards like a younger audience because it's explained in layman's terms...” [Participant 2]

These findings support the principles of inclusive pedagogical approaches including universal design for learning (UDL) as a beneficial teaching strategy for people with SpLD. Promoting inclusivity through multiple means of representation, action and engagement for learners (CAST, 2024). Furthermore, most participants also expressed a preference for hands on learning.

“...I do pick it up better actually doing it...” [Participant 7]

These findings also support existing literature describing nursing simulations which provide practical learning experiences can help develop confidence and critical thinking skills of students by employing a protected and controlled environment which will not compromise patient safety (Hussein & Cuncannon, 2022). For people with a SpLD incorporating this teaching strategy throughout the curriculum may capture and maintain their attention, making it easier for them to stay focused and motivated. Furthermore, practical experiences may help learners with SpLD better understand and retain abstract concepts. These multisensory approaches can support confidence and self-esteem, leveraging the strengths of individuals with SpLD and providing dynamic and engaging ways to learn may align with their strengths and preferences (Hayden et al., 2014).

Linking closely to the physical environment for learning, social environment refers to the network of social interactions, relationships and cultural norms which influence the learning experience (Felice et al., 2022). When learners feel accepted, respected, and valued they are more likely to engage, participate, collaborate and apply their knowledge in meaningful ways. This sense of belonging contributes towards a positive learning environment where students feel comfortable expressing their ideas and opinions or taking academic risks (Pesonen et al., 2023). Within this study the participants referred to feeling uncomfortable in group environments and unable to express themselves in these situations. This may also be linked to the theme of identity and sub-theme external perspectives.

“...Sometimes you could feel like you're slowing everybody down because you're not understanding it fast...” [Participant 5]

This theme has highlighted that the environment in which learning is facilitated is significant to engagement, participation and retention of knowledge for participants. It also links closely to the theme of SpLD identity and participant self and external perspectives.

Technological Enhancements/Barriers

Experience in using assistive technology emerged as significant themes which were broadly discussed across most of the data set. Recent research concludes that assistive technology is a valuable instrument for promoting accessibility and inclusion of students throughout their learning (Clouder et al., 2020). Some participants within this study also acknowledged the usefulness of assistive technology.

“...Definitely the technology assistant. I think to me a lot of doing this from home on the PC has been beneficial...” [Participant 1]

However, different participants also described a variety of barriers to using available assistive technology. One participant discussed an actual or perceived unwarranted stigma that continues to impact upon their learning experience with assistive technology which also links closely with the theme of identity:

“...I know I've got software now which does help but again unless you're sitting there with your laptop, nobody else is it kind of singles

you out a little bit. So, to be honest, I haven't used it. I use it when I'm on teams and I find that really helps. I find it really helpful when I'm on teams, but in a class I struggle with classwork. I struggle with going into university..." [Participant 4]

One participant discussed the perceived learning challenges caused by the impact of both physical and social environmental obstacles in the workplace by non-allocated seating arrangements or insufficient space for private use of assistive technology.

"...I don't feel confident when I'm in a busy office using me Dragon to talk to it and then it's trying to get somewhere private to do it but the building would struggle with room capacity..." [Participant 3]

Reasonable adjustments aim to create an inclusive environment where individuals can thrive academically by helping apprentices minimize barriers to learning and provide necessary support (Fernández-Batanero et al., 2022). However, speech recognition systems are not always reliable (Jaddoh et al., 2022). The findings from this study also describe practical difficulties while using assistive technology:

"...With Glean I find the mobile a little bit more user friendly than rather than the computer for some reason the computer doesn't record the information as much as I want like..." [Participant 5]

Another obstacle for apprentice nurses who need assistive technology to overcome is the requirement for the installation of software on at least two devices; a personal laptop for university academic work and a trust specific computer provided by their employers. Currently, not all the required university software is accessible on trust laptops and similarly trust specific software is not permitted on university devices. Hence, this creates a problem for apprentices needing to use assistive technologies on two devices sourced from different providers. In this study participants also referred to some assistive technology requests being unfulfilled.

"...the only thing that is still a bit of a bug bear is three years into the program I still haven't got the same software on my work computer which is something I was promised at the beginning..." [Participant 1]

Whilst assistive technologies can have educational, psychological and social benefits to students which may enhance learning and empower individuals by providing the tools they need to overcome learning barriers, improve skills and achieve goals (Haleem et al., 2022). The findings of this study support findings which suggest assistive technology is not always available or accessible to students (Viner et al., 2022).

However, the participants were hopeful and appreciated the support offered from the university, not just from the technological side of things. These comments were reflected across the whole of the participants and indicate that despite the barriers to engagement discussed, participants are thankful for the support that they receive:

"...I never imagined that I'd be doing as well as I'm doing. I have really come forward with the disability network support in the university..." [Participant 1]

Recommendations, Limitations, and Conclusion

The findings of this study support existing literature that incidents of SpLD are prevalent in apprentice nurse populations. In this study, 5 out of 8 participants did not have a SpLD diagnosis prior to enrolment at university. This may also be linked with the average age of the

participant (39) and the apprenticeship program of study. This reveals that there may be increasing episodes of apprentice nursing students with undetected SpLD, which presents significant challenges for nurse education programs. It highlights and supports existing recommendations from research, that there is a need for pre-emptive action, comprehensive support systems and accommodations to effectively address the challenges faced by the expanding group of learners (Crawford et al., 2022). This study's findings would support a targeted intervention aimed at recognizing SpLD for mature learners; specifically, that there is a need for pre-emptive action, comprehensive support systems and accommodations to effectively address the challenges faced by the expanding group of learners (Henderson, 2017). The additional confounding variable is the cross-boundary nature of the apprentices as being both employees of a healthcare organization and a students of a higher education institution (Smith et al., 2019) which further emphasizes the need for pre-emptive action with this group of learners.

Some participants described inconsistent support mechanisms across the various learning environments that they encounter. Hence, this study suggests that supporting apprentice nurses with SpLD requires a comprehensive, collaborative and consistent approach in all settings (including the workplace and academia) to ensure apprentices can succeed in all environments with application of reasonable adjustments. This will require institutions providing an integrated support framework between academic staff, disability support teams and employers, including regular meetings with apprentices to monitor their progress based on their evolving needs would ensure that no student is left unsupported and reasonable adjustments are applied in all settings (Carrol et al., 2020).

A major limitation of the study is related to the engagement of participants, focusing on how their SpLD may have impacted on their engagement with the research and researcher. Examples of this include the need to allow additional time for information processing. For example, rather than allowing extra time within the interview, providing participants with the questions ahead of the interview may have allowed them additional opportunities to mentally prepare to discuss sensitive issues, reflect and elaborate on their experiences which were effectively used in Woods et al. (2016) study into experiences of obesity. Furthermore, this could have reduced potential anxiety and given them more cognitive time to formulate their narrative; thus, furnishing extra depth to their answers. This approach would also link with allowing the participants to be their authentic selves during the interview (Dennis, 2014). Some participants had difficulties articulating their experiences through verbal expression. Hence, providing alternative formats such as written questions which could be used as a reference and the opportunity for participants to type or pre-record their responses may also have been beneficial to ensure perspectives were captured through their preferred method of communication (Page et al., 2022).

This study highlights limited available knowledge of SpLD in apprentice nurse education and the need for ongoing further research in this area. However, the study has achieved its intended aim to provide insight into the multifaceted landscape of the challenges, triumphs, coping mechanisms and support needs of apprentice nurses with SpLD captured through semi-structured interviews. The findings describe the unique personal experiences of SpLD for apprentice nurses within their work base, on clinical placements and in academic settings. This study supports raising awareness and promoting early identification of SpLD.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

CRedit authorship contribution statement

Sally Lawton: Writing – review & editing, Visualization, Validation, Methodology, Investigation, Conceptualization. **Mark Widdowfield:** Writing – review & editing, Writing – original draft, Validation, Supervision, Formal analysis.

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